Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A system for the secure exchange of [[date]] data between a sender device and a receiver device over the public-switched telephone network (PSTN), comprising:

a sender device configured for connection to the public-switched telephone network (PSTN);

a receiver device configured for connection to the PSTN;

a telephony switch configured for operation on the PSTN for routing calls between a sender and receiver;

a telephone server configured for controlling said telephony switch and for securing the exchange of data between said sender device and said receiver device;

[[a]] said sender device, at a first interface, configured to encrypt selected data for communication to a receiver device, and ~~the sender device also configured~~ to initiate a telephone call to said telephony server, known to said sender device, within a first transmission across a communications link through the telephony switch operating on the PSTN [[,]] ;

[[a]] said telephony server ~~linked~~ coupled to [[the]] said sender device by the communications link for,

~~the server configured to receive~~ receiving a transmission initiated by [[the]] said sender device,

~~to verify~~ verifying the authenticity of [[the]] said sender device,

~~to initiate~~ initiating an authentication ~~a second~~ transmission to [[the]] said receiver device, [[and]]

to verify verifying the authenticity of [[the]] said receiver device,

establishing a connection over the PSTN through said telephone switch from said sender device, which has been authenticated, to said receiver device which has also been authenticated, and

creating a record for billing of communications service performed over the PSTN by said system;

wherein said telephony [[the]] server further is configured to permit linkage coupling of said [[the]] sender device and said [[the]] receiver device for communication of [[the]] said encrypted selected data without routing through [[the]] said telephony server following verification of authenticity authentication of both [[the]] said sender device and [[the]] said receiver device[[,]] ;

wherein said sender device is configured for initiating a second transmission over the communication link established by said telephony server with said receiver device;

[[the]] wherein said receiver device, at a second interface, is configured to respond to the second transmission from [[the]] said sender device server and to decrypt receive the selected encrypted data received from [[the]] said sender device over said PSTN further configured to decrypt the selected data;

wherein said system is configured for securely exchanging data over the PSTN as a single call connection from the sender device through the PSTN in response to authentication of both said sender device and said receiver device.

2. (currently amended): A method of securely exchanging data between a sender modem and a receiver modem over a public-switched telephone network (PSTN), comprising the steps of :

selecting data to be transmitted as selected data from [[the]] a sender modem to [[the]] a receiver modem over a public-switched telephone network (PSTN)[[,]] ;

encrypting the selected data within an enciphering unit associated with said sender modem [[,]] ;

initiating a first transmission of sender authentication and receiver identification information to a trusted service provider on said PSTN and configured for controlling a telephony switch for routing telephone calls within said PSTN [[,]] ;

[[the]] said first transmission containing encrypted data sufficient to ~~verify the authenticity of~~ authenticate the sender modem and [[the]] identity of the receiver modem [[,]] ;

verifying authenticity of said sender modem by said trusted service provider on said PSTN, in response to [[the]] said first transmission, ~~the authenticity of the sender,~~ ;

initiating from [[the]] said trusted service provider, upon verification of the authenticity of the sender modem, ~~a second~~ an authentication transmission to connect with said ~~to and verify the authenticity of the~~ receiver modem as identified within said first transmission of said sender modem [[,]] ;

verifying the authenticity of [[the]] said receiver modem [[,]] ;

transferring the connection over the PSTN from said ~~linking the~~ sender ~~and the~~ modem to said receiver modem for direct delivery of a second transmission from said sender modem containing [[the]] said selected data;

exchanging of encryption keys within a handshaking process between said sender modem and said receiver modem;

wherein said second transmission is communicated over said PSTN from said sender modem to said receiver modem; and

creating a record for billing of communications service performed over the PSTN by said system.

3. (currently amended): ~~Apparatus for facilitating the secured exchange of~~ An apparatus for securely exchanging selected data over a public switched telephone network (PSTN), ~~including~~ comprising:

a telephony server configured for controlling a telephony switch adapted for routing telephone calls through the PSTN from a sender to a receiver;

said telephony server configured for,

receiving encrypted sender authentication and receiver identification information from a sender making a call to said telephony server,

decrypting sender authentication and receiver identification information,

authenticating the sender,

connecting said telephony server through the telephony switch to a recipient identified in said encrypted receiver identification information,

authenticating the recipient,

transferring the connection from the sender to the recipient to allow the sender and the recipient to exchange selected data which has been encrypted for transfer over the PSTN through said telephony switch; and

a recording mechanism configured for creating a record for billing of communications services performed over the PSTN by said apparatus in securely connecting sender and receiver.

~~a pair of interfaces capable of transmitting and receiving, via the public switched telephone network, data from at least two secured data exchange devices,~~

~~an encipher/decipher unit capable of decrypting an identity identifier received from one of said data exchange devices which corresponds to the other of said data exchange devices,~~

~~a control unit capable of originating a data connection to one of said data exchange devices via one of said interfaces to said public switched telephone network.~~

~~(d) a switch capable of connecting said interfaces and linking connections to said data exchange devices.~~

4. (currently amended): [[The]] A system as recited in [[of]] claim 1, wherein in response to said server establishing a connection over the public switched telephone network (PSTN) from said sender device to said receiver device, said sender device and said receiver device perform a handshaking process and then communicate

encrypted data from sender to receiver, and/or from receiver to sender ~~in which the communications link is a public switched telephone network~~.

5. (currently amended): [[The]] A system as recited in [[of]] claim 1, wherein said recipient identification information comprises the account number of said recipient as known by said telephony server ~~in which the communications link is a private branch exchange~~.

6. (currently amended): [[The]] A system as recited in [[of]] claim 1, wherein said telephony server is disconnected from the call in response to said telephony server establishing said communication link between said sender device and said receiver device ~~in which the communications link is a wide area network~~.

7. (currently amended): [[The]] A system as recited in [[of]] claim 1, wherein said record for billing of communications service performed over the public switched telephone network (PSTN) by said system is configured for billing users on a per-call and/or per-minute basis for use of services provided by ~~further including a billing system for recording usage of~~ said system.

8. (currently amended): [[The]] A system as recited in [[of]] claim [[7]] 1, wherein said record for billing of communications service ~~system is connected to said public switched network (PSTN) and~~ is configured for submitting ~~to submit~~ charges to appear on a telephone bill of a user of said system.

9. (currently amended): [[The]] A system as recited in [[of]] claim [[6]] 1, wherein said record for billing of communications service is configured for obtaining ~~system is connected to~~ obtains payment from said user by an electronic payment mechanism.

10. (currently amended): [[The]] A system as recited in [[of]] claim 1:

wherein the system protects the anonymity of both the sender device and the receiver device;

wherein anonymity of said sender device is achieved in response to said system establishing a telephone call from said sender device to said telephony server, and not directly to said receiver device; and

wherein the anonymity of said receiver device is achieved in response to routing the call over the public switched telephone network (PSTN), from said sender device to said receiver device, without communicating the telephone number of the receiver over the PSTN.

11. (currently amended): [[The]] A system as recited in [[of]] claim 1, wherein said sender device and said receiver device comprise secure modem devices (SMD) configured for following a cryptographic protocol in cooperation with said telephony server further including an auditing system for recording usage of said system and for recording operational errors.

12. (currently amended): [[The]] A system as recited in [[of]] claim 1, wherein one configuration of said sender device limits it to calling out only to said telephony server further including at least two modems, each communicating with one of said two interfaces.

13. (currently amended): [[The]] A system as recited in [[of]] claim [[18]] 1:

wherein said sender device and said receiver device, at said first and second interfaces, comprise digital modems;

wherein at least one telephony switch is coupled between the modems coupled at said first interface and said second interface; and

wherein said telephony switch and said modems are digital, and said telephony [[the]] switch connects digital outputs of said modems.

14. (currently amended): [[The]] A system as recited in [[of]] claim 1, wherein at least one of said interfaces [[is]] comprises a T1, ISDN or ADSL, telephone connection.

15. (new):   A system as recited in claim 1, wherein a valid account on said telephony server must be established by said sender device as a condition for verification of authenticity.

16. (new):   A system as recited in claim 1, further comprising:

a computer coupled to said sender device for selecting data information, and for selecting a recipient for said selected data to be sent to; and

a computer coupled to said receiver device for controlling the receipt of selected data from said sender device.

17. (new):   A system as recited in claim 1, wherein said record for billing is provided to a local exchange carrier, or local telephone service provider, which incorporates the billing into a conventional phone bill for payment by a customer.

18. (new):   A system as recited in claim 1, further comprising an operator interface configured to allow a sender to select the data which is to be transferred, and for selecting a recipient of that data.

19. (new): A system as recited in claim 1, wherein said first transmission is executed in response to aggregation, compression and encryption of data selected by a sender for said sending device, and the selection of an authorized recipient.

20. (new): A system as recited in claim 1, further comprising said telephony server caching said encrypted selected data from said sender device for forwarding to the receiver device at a later time.